

SEQUENCE LISTING

<110> DIXON, JANE
MCKINNON, DAVID

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 35 40 45

Phe Cys Glu Leu Ala Gly Phe Ala Arg Thr Glu Val Met Gln Lys Ser
 50 55 60

Cys Ser Cys Lys Phe Leu Phe Gly Val Glu Thr Asn Glu Gln Leu Met
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Leu Gln Ile Glu Lys Ser Leu Glu Glu Lys Val Glu Phe Lys Gly Glu
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Ile Met Phe Tyr Lys Lys Asn Gly Ala Pro Phe Trp Cys Leu Leu Asp
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Asp Ser Ala Arg Arg Ser Arg Ala Val Leu Tyr His Ile Ser Gly
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His Leu Gln Arg Arg Glu Lys Asn Lys Leu Lys Ile Asn Asn Asn Val
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Ile Leu Leu His Cys Gly Ala Leu Arg Ala Thr Trp Asp Gly Phe Ile
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Thr Thr Phe Val Gly Pro Gly Gly Glu Val Ile Ser Asp Pro Lys Leu
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Ile Arg Met Asn Tyr Leu Lys Thr Trp Phe Val Ile Asp Leu Leu Ser
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Cys Leu Pro Tyr Asp Ile Ile Asn Ala Phe Glu Asn Val Asp Glu Gly
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Thr Cys Asp Phe Leu His Gly Pro Arg Thr Gln Arg Arg Ala Ala Ala
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Gln Ile Ala Gln Ala Leu Leu Gly Ala Glu Glu Arg Lys Val Glu Ile
85 90 95

Ala Phe Tyr Arg Lys Asp Gly Ser Cys Phe Leu Cys Leu Val Asp Val
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Val Pro Val Lys Asn Glu Asp Gly Ala Val Ile Met Phe Ile Leu Asn
115 120 125

Phe Glu Val Val Met Glu Lys Asp Met Val Gly Ser Pro Ala His Asp
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Lys Thr Phe Arg Leu Lys Leu Pro Ala Leu Leu Ala Leu Thr Ala Arg
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Glu Ser Pro Met Arg Thr Gly Ser Thr Gly Ser Pro Gly Ala Pro Gly
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Ala Val Val Val Asp Val Asp Leu Thr Pro Ala Ala Pro Ser Ser Glu
195 200 205

Ser Leu Ala Leu Asp Glu Val Ser Ala Met Asp Asn His Val Ala Gly
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Lys Gly Trp Phe Leu Ile Asp Met Val Ala Ala Ile Pro Phe Asp Leu
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Glu Gln Pro His Met Asp Ser His Ile Gly Trp Leu His Asn Leu Gly
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Asp Gln Ile Gly Lys Pro Tyr Asn Ser Ser Gly Leu Gly Gly Pro Ser
595 600 605

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610 615 620

Thr Ser Val Gly Phe Gly Asn Val Ser Pro Asn Thr Asn Ser Glu Lys
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Ile Phe Ser Ile Cys Val Met Leu Ile Gly Ser Leu Met Tyr Ala Ser
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Ile Phe Gly Asn Val Ser Ala Ile Ile Gln Arg Leu Tyr Ser Gly Thr
660 665 670

Ala Arg Tyr His Thr Gln Met Leu Arg Val Arg Glu Phe Ile Arg Phe
675 680 685

His Gln Ile Pro Asn Pro Leu Arg Gln Arg Leu Glu Glu Tyr Phe Gln
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His Ala Trp Ser Tyr Thr Asn Gly Ile Asp Met Asn Ala Val Leu Lys
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Gly Phe Pro Glu Cys Leu Gln Ala Asp Ile Cys Leu His Leu Asn Arg
725 730 735

Ser Leu Leu Gln His Cys Lys Pro Phe Arg Gly Ala Thr Lys Gly Cys
740 745 750

Leu Arg Ala Leu Ala Met Lys Phe Lys Thr Thr His Ala Pro Pro Gly
755 760 765

Asp Thr Leu Val His Ala Gly Asp Leu Leu Thr Ala Leu Tyr Phe Ile
770 775 780

Ser Arg Gly Ser Ile Glu Ile Leu Arg Gly Asp Val Val Val Ala Ile
785 790 795 800

Leu Gly Lys Asn Asp Ile Phe Gly Glu Pro Leu Asn Leu Tyr Ala Arg
805 810 815

Pro Gly Lys Ser Asn Gly Asp Val Arg Ala Leu Thr Tyr Cys Asp Leu
820 825 830

His Lys Ile His Arg Asp Asp Leu Leu Glu Val Leu Asp Met Tyr Pro

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845

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Gly Ala Phe Ser Gly Val Ser Asn Ile Phe Ser Phe Trp Gly Asp Ser
995 1000 1005

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1105 1110 1115 1120

Phe Glu Glu Leu Pro Ala Gly Ala Pro Glu Leu Pro Gln Asp Gly Pro
1125 1130 1135

Thr Arg Arg Leu Ser Leu Pro Gly Gln Leu Gly Ala Leu Thr Ser Gln

1140

1145

1150

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Gly Asn Ala Gln Ile Val Asp Trp Pro Ile Val Tyr Ser Asn Asp Gly
35 40 45

Phe Cys Lys Leu Ser Gly Tyr His Arg Ala Glu Val Met Gln Lys Ser
50 55 60

Ser Ala Cys Ser Phe Met Tyr Gly Glu Leu Thr Asp Lys Asp Thr Val
65 70 75 80

Glu Lys Val Arg Gln Thr Phe Glu Asn Tyr Glu Met Asn Ser Phe Glu
85 90 95

Ile Leu Met Tyr Lys Lys Asn Arg Thr Pro Val Trp Phe Phe Val Lys
100 105 110

Ile Ala Pro Ile Arg Asn Glu Gln Asp Lys Val Val Leu Phe Leu Cys
115 120 125

Thr Phe Ser Asp Ile Thr Ala Phe Lys Gln Pro Ile Lys Asp Asp Ser
130 135 140

Cys Lys Gly Trp Gly Lys Phe Ala Arg Leu Thr Arg Ala Leu Thr Ser
145 150 155 160

Ser Arg Gly Val Leu Gln Gln Leu Ala Pro Ser Val Gln Lys Gly Glu
165 170 175

Asn Val His Lys His Ser Arg Leu Ala Glu Val Leu Gln Leu Gly Ser
180 185 190

Asp Ile Leu Pro Gln Tyr Lys Gln Glu Ala Pro Lys Pro Pro His Ile
195 200 205

Ile Leu His Tyr Cys Val Phe Lys Thr Thr Trp Asp Trp Ile Ile
210 215 220

Leu Gln Ile Cys Pro Lys Asp Asn Arg Ala Asp Ile Cys Val His Leu
530 535 540

Asn Arg Lys Val Phe Lys Glu His Pro Ala Phe Arg Leu Ala Ser Asp
545 550 555 560

Gly Cys Leu Arg Ala Leu Ala Met Glu Phe Gln Thr Val His Cys Ala
565 570 575

Pro Gly Asp Leu Ile Tyr His Ala Gly Glu Asp Val Asp Ser Leu Cys
580 585 590

Phe Val Val Ser Gly Ser Leu Glu Val Ile Gln Asp Asp Glu Val Val
595 600 605

Ala Ile Leu Gly Lys Gly Asp Val Phe Gly Asp Val Phe Trp Lys Glu
610 615 620

Ala Thr Leu Ala Gln Ser Cys Ala Asn Val Arg Ala Leu Thr Tyr Cys
625 630 635 640

Asp Leu His Val Ile Lys Arg Asp Ala Leu Gln Lys Val Leu Glu Phe
645 650 655

Tyr Thr Ala Phe Ser His Ser Phe Ser Arg Asn Leu Ile Leu Thr Tyr
660 665 670

Asn Leu Arg Lys Arg Ile Val Phe Arg Lys Ile Ser Asp Val Lys Arg
675 680 685

Glu Glu Glu Arg Met Lys Arg Lys Asn Glu Ala Pro Leu Ile Leu
690 695 700

Pro Pro Asp His Pro Val Arg Arg Leu Phe Gln Arg Phe Arg Gln Gln
705 710 715 720

Lys Glu Ala Arg Leu Ala Ala Glu Arg Gly Gly Arg Asp Leu Asp Asp
725 730 735

Leu Asp Val Glu Lys Gly Asn Ala Leu Thr Asp His Thr Ser Ala Asn
740 745 750

His Ser Leu Val Lys Ala Ser Val Val Thr Val Arg Glu Ser Pro Ala
755 760 765

Thr Pro Val Ser Phe Gln Ala Ala Ser Thr Ser Thr Val Ser Asp His
770 775 780

Ala Lys Leu His Ala Pro Gly Ser Glu Cys Leu Gly Pro Lys Ala Gly
785 790 795 800

Gly Gly Asp Pro Ala Lys Arg Lys Gly Trp Ala Arg Phe Lys Asp Ala
805 810 815

Cys Gly Lys Gly Glu Asp Trp Asn Lys Val Ser Lys Ala Glu Ser Met
820 825 830

Leu Ile Leu Thr Phe Tyr Thr Ala Ile Leu Val Pro Tyr Asn Val Ser
225 230 235 240

Phe Lys Thr Arg Gln Asn Asn Val Ala Trp Leu Val Val Asp Ser Ile
245 250 255

Val Asp Val Ile Phe Leu Val Asp Ile Val Leu Asn Phe His Thr Thr
260 265 270

Phe Val Gly Pro Ala Gly Glu Val Ile Ser Asp Pro Lys Leu Ile Arg
275 280 285

Met Asn Tyr Leu Lys Thr Trp Phe Val Ile Asp Leu Leu Ser Cys Leu
290 295 300

Pro Tyr Asp Val Ile Asn Ala Phe Glu Asn Val Asp Glu Gly Ile Ser
305 310 315 320

Ser Leu Phe Ser Ser Leu Lys Val Val Arg Leu Leu Arg Leu Gly Arg
325 330 335

Val Ala Arg Lys Leu Asp His Tyr Ile Glu Tyr Gly Ala Ala Val Leu
340 345 350

Val Leu Leu Val Cys Val Phe Gly Leu Ala Ala His Trp Met Ala Cys
355 360 365

Ile Trp Tyr Ser Ile Gly Asp Tyr Glu Ile Phe Asp Glu Asp Thr Lys
370 375 380

Thr Ile Arg Asn Asn Ser Trp Leu Tyr Gln Leu Ala Leu Asp Ile Gly
385 390 395 400

Thr Pro Tyr Gln Phe Asn Gly Ser Gly Ser Gly Lys Trp Glu Gly Gly
405 410 415

Pro Ser Lys Asn Ser Val Tyr Ile Ser Ser Leu Tyr Phe Thr Met Thr
420 425 430

Ser Leu Thr Ser Val Gly Phe Gly Asn Ile Ala Pro Ser Thr Asp Ile
435 440 445

Glu Lys Ile Phe Ala Val Ala Ile Met Met Ile Gly Ser Leu Leu Tyr
450 455 460

Ala Thr Ile Phe Gly Asn Val Thr Thr Ile Phe Gln Gln Met Tyr Ala
465 470 475 480

Asn Thr Asn Arg Tyr His Glu Met Leu Asn Ser Val Arg Asp Phe Leu
485 490 495

Lys Leu Tyr Gln Val Pro Lys Gly Leu Ser Glu Arg Val Met Asp Tyr
500 505 510

Ile Val Ser Thr Trp Ser Met Ser Arg Gly Ile Asp Thr Lys Lys Val
515 520 525